

EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	14248209	@ad<"19960822"	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:13
L2	32393	"711"/\$.ccls.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:15
L3	726571	software	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:15
L4	542650	hardware	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:15
L5	301	DLAT	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:15
L6	331734	L3 and L4	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:15
L7	5490	TLB	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:15
L8	61	L6 and L5	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:15
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L10	15	L8 and L7	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:15
L11	15	L10 and L9	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:15
L12	2684802	memory protection	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:15
L13	19156	prevent\$4 near3 writ\$4	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:15
L14	13377	L12 and L13	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:15
L15	0	L11 and L14	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:15
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L17	20	(cmelik near robert).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:16
L18	19	(wing near malcolm).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:16
L19	49	L16 or L17 or L18	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:16

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L20	0	11 and 19	US-PGPUB; USPAT; EPO; JPO; DERWENT; IBM_TDB	OR	OFF	2007/01/07 23:16
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1 [Cache Memories](#)



Alan Jay Smith

September 1982 **ACM Computing Surveys (CSUR)**, Volume 14 Issue 3

Publisher: ACM Press

Full text available: [pdf\(4.61 MB\)](#)

Additional Information: [full citation](#), [references](#), [citations](#),

2 [Mondrian memory protection](#)



Emmett Witchel, Josh Cates, Krste Asanović

October 2002

ACM SIGPLAN Notices , ACM SIGARCH Computer Architecture News , ACM 10th international conference on Architectural support for programming
Issue 10 , 5 , 5

Publisher: ACM Press

Full text available: [pdf\(1.53 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [refe](#)

Mondrian memory protection (MMP) is a fine-grained protection scheme that allows multiple pro services. In contrast to earlier page-based systems, MMP allows arbitrary permissions control at permissions table to reduce space overheads and employ two levels of permissions caching to re implementation add less than 9% overhead to ...

3 [Energy efficient memory systems: Generating physical addresses directly for saving instru](#)

I. Kadayif, A. Sivasubramaniam, M. Kandemir, G. Kandiraju, G. Chen

November 2002

Proceedings of the 35th annual ACM/IEEE international symposium on I

Publisher: IEEE Computer Society Press

Full text available: [pdf\(1.26 MB\)](#) [Publisher Site](#)

Additional Information: [full citation](#), [abstract](#), [refe](#)

Power consumption and power density for the Translation Lookaside Buffer (TLB) are important cache design as well. This paper embarks on a new philosophy for reducing the number of acces optimizations. The overall idea is to keep a translation currently being used in a register and avc change. We propose f ...

4 [Architectural support for translation table management in large address space machines](#)




Jerry Huck, Jim Hays

May 1993

ACM SIGARCH Computer Architecture News , Proceedings of the 20th ai
'93, Volume 21 Issue 2

Publisher: ACM Press

Full text available:  pdf(1.34 MB)

Additional Information: [full citation](#), [abstract](#), [refe](#)

Virtual memory page translation tables provide mappings from virtual to physical addresses. When not contain a translation, these tables provide the translation. Approaches to the structure and i to complete software based algorithms. The size of the virtual address space used by processes

5 Exokernel: an operating system architecture for application-level resource management




D. R. Engler, M. F. Kaashoek, J. O'Toole

December 1995

ACM SIGOPS Operating Systems Review , Proceedings of the fifteenth A

Volume 29 Issue 5

Publisher: ACM Press

Full text available:  pdf(2.16 MB)

Additional Information: [full citation](#), [references](#), [c](#)

6 Software controlled memory systems: Energy-efficient address translation for virtual memc





Xiangrong Zhou, Peter Petrov

September 2005

**Proceedings of the 3rd IEEE/ACM/IFIP international conference on Har
'05 , Proceedings of the 3rd IEEE/ACM/IFIP international conference or
CODES+ISSS '05**

Publisher: ACM Press, IEEE Computer Society

Full text available:  pdf(150.88 KB)  [Publisher Site](#)

Additional Information: [full citation](#), [abstract](#), [refe](#)

In this paper we present an application-driven address translation scheme for low-power and re power inefficiency and nondeterministic execution times of address-translation mechanisms hav memory in embedded processors with low-power and real-time constraints. To address this prot organization, where ...

Keywords: adaptable systems, multi-mode synthesis, reconfigurability

7 Mondrix: memory isolation for linux using mondriaan memory protection



Emmett Witchel, Junghwan Rhee, Krste Asanović

October 2005

ACM SIGOPS Operating Systems Review , Proceedings of the twentieth

Volume 39 Issue 5

Publisher: ACM Press

Full text available:  pdf(332.09 KB)

Additional Information: [full citation](#), [abstract](#), [refe](#)

This paper presents the design and an evaluation of Mondrix, a version of the Linux kernel with hardware and software that provides efficient fine-grained memory protection between multiple to enforce isolation between kernel modules which helps detect bugs, limits their damage, and i MMP exposed two kerne ...

Keywords: fine-grained memory protection

8 Recency-based TLB preloading



Ashley Saulsbury, Fredrik Dahlgren, Per Stenström

May 2000

**ACM SIGARCH Computer Architecture News , Proceedings of the 27th an
'00, Volume 28 Issue 2**

Publisher: ACM Press

Full text available:  pdf(651.05 KB)

Additional Information: [full citation](#), [abstract](#), [refe](#)

Caching and other latency tolerating techniques have been quite successful in maintaining high However, TLB misses have become a serious bottleneck as working sets are growing beyond the TLB miss latency by using preloading techniques. We present results for traditional next-page TL

9 Disco: running commodity operating systems on scalable multiprocessors



Edouard Bugnion, Scott Devine, Kinshuk Govil, Mendel Rosenblum

November 1997

ACM Transactions on Computer Systems (TOCS), Volume 15 Issue 4

Publisher: ACM Press

Full text available: [pdf\(400.76 KB\)](#)

Additional Information: [full citation](#), [abstract](#), [refe](#)

In this article we examine the problem of extending modern operating systems to run efficiently implementation effort. Our approach brings back an idea popular in the 1970s: virtual machine operating systems on a scalable multiprocessor. This solution addresses many of the challenges approach with a prototy ...

Keywords: scalable multiprocessors, virtual machines

10 Hardware support for fast capability-based addressing



Nicholas P. Carter, Stephen W. Keckler, William J. Dally

November 1994

ACM SIGPLAN Notices , ACM SIGOPS Operating Systems Review , Proceedings for programming languages and operating systems ASPLOS-VI,

Publisher: ACM Press

Full text available: [pdf\(1.07 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [refe](#)

Traditional methods of providing protection in memory systems do so at the cost of increased co permissions for processes. With the advent of computers that supported cycle-by-cycle multithr context switch are unacceptable, but protecting unrelated processes from each other is still nec environments. This pap ...

11 Fast detection of communication patterns in distributed executions

Thomas Kunz, Michiel F. H. Seuren

November 1997

Proceedings of the 1997 conference of the Centre for Advanced Studies

Publisher: IBM Press

Full text available: [pdf\(4.21 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [refe](#)

Understanding distributed applications is a tedious and difficult task. Visualizations based on pro of the execution of the application. The visualization tool we use is Poet, an event tracer develop very complex and do not provide the user with the desired overview of the application. In our e: commun ...

12 Disco: running commodity operating systems on scalable multiprocessors



Edouard Bugnion, Scott Devine, Mendel Rosenblum

October 1997

ACM SIGOPS Operating Systems Review , Proceedings of the sixteenth /
Volume 31 Issue 5

Publisher: ACM Press

Full text available: [pdf\(2.30 MB\)](#)

Additional Information: [full citation](#), [references](#), [c](#)

13 Decoupled hardware support for distributed shared memory



Steven K. Reinhardt, Robert W. Pfile, David A. Wood

May 1996

ACM SIGARCH Computer Architecture News , Proceedings of the 23rd an
'96, Volume 24 Issue 2

Publisher: ACM Press

Full text available: [pdf\(1.47 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [refe](#)

This paper investigates hardware support for fine-grain distributed shared memory (DSM) in net cost relative to dedicated DSM systems, we decouple the functional hardware components of DS two decoupled systems, Typhoon-0 and Typhoon-1. Typhoon-0 uses an off-the-shelf protocol pr

only DSM-specific hard ...

14 Shade: a fast instruction-set simulator for execution profiling



Bob Cmelik, David Keppel

May 1994

ACM SIGMETRICS Performance Evaluation Review , Proceedings of the : modeling of computer systems SIGMETRICS '94, Volume 22 Issue 1

Publisher: ACM Press

Full text available: pdf(1.28 MB)

Additional Information: [full citation](#), [abstract](#), [refe](#)

Tracing tools are used widely to help analyze, design, and tune both hardware and software sys efficient instruction-set simulation with a flexible, extensible trace generation capability. Efficient and trace the application program. The user may control the extent of tracing in a variety of wa collected ...

15 Embedded systems: Arithmetic-based address translation for energy-efficient virtual mem



Xiangrong Zhou, Peter Petrov

September 2005

Proceedings of the 18th annual symposium on Integrated circuits and s

Publisher: ACM Press

Full text available: pdf(267.86 KB)

Additional Information: [full citation](#), [abstract](#), [refe](#)

In this paper, we present an arithmetic-based address translation scheme for low-power and re purpose virtual memory support comes with its fundamental disadvantages of excessive power disadvantages have been the main reason for not adopting virtual memory and its associated be operations are major requirements. To ...

16 Virtual memory primitives for user programs



Andrew W. Appel, Kai Li

April 1991

ACM SIGPLAN Notices , ACM SIGARCH Computer Architecture News , AC fourth international conference on Architectural support for programmi
25 Issue 4 , 2 , Special Issue

Publisher: ACM Press

Full text available: pdf(1.37 MB)

Additional Information: [full citation](#), [references](#), [c](#)

17 The M-Machine multicomputer

Marco Fillo, Stephen W. Keckler, William J. Dally, Nicholas P. Carter, Andrew Chang, Yevgeny Gure
December 1995 **Proceedings of the 28th annual international symposium on Microarchitec**

Publisher: IEEE Computer Society Press

Full text available: pdf(1.29 MB)

Additional Information: [full citation](#), [references](#), [citations](#), [inc](#)

18 Multigrain shared memory



Donald Yeung, John Kubiawicz, Anant Agarwal

May 2000

ACM Transactions on Computer Systems (TOCS), Volume 18 Issue 2

Publisher: ACM Press

Full text available: pdf(369.18 KB)

Additional Information: [full citation](#), [abstract](#), [refe](#)

Parallel workstations, each comprising tens of processors based on shared memory, promise co of such small- to medium-scale shared-memory multiprocessors through software over a local a these systems Distributed Shared-memory MultiProcessors (DSMPs). This article introduces the sharing, ca ...

Keywords: distributed memory, symmetric multiprocessors, system of systems

19 The interaction of architecture and operating system design



Thomas E. Anderson, Henry M. Levy, Brian N. Bershad, Edward D. Lazowska
April 1991

ACM SIGPLAN Notices , ACM SIGARCH Computer Architecture News , ACM fourth international conference on Architectural support for programming languages and operating systems
25 Issue 4 , 2 , Special Issue

Publisher: ACM Press

Full text available: [pdf\(1.60 MB\)](#)

Additional Information: [full citation](#), [references](#), [index](#)

20 The effects of virtually addressed caches on virtual memory design and performance



Jon Inouye, Ravindranath Konuru, Jonathan Walpole, Bart Sears
October 1992

ACM SIGOPS Operating Systems Review, Volume 26 Issue 4

Publisher: ACM Press

Full text available: [pdf\(1.32 MB\)](#)

Additional Information: [full citation](#), [abstract](#), [index](#)

Recent times have witnessed rapid advances in microprocessor technology resulting in an order of magnitude improvements in hardware performance. However, operating system performance has not kept pace with that of the underlying processor performance can have a significant impact on overall system performance.

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